

# +3 CONTACT

The Monthly Magazine for The +3 Users' Group

ISSUE: 15

## RADIO COMMS

Communication over the radio waves explained



**MAIL ORDER  
BARGAINS GALORE !!**

**MUSIC WRITER  
"UTILITY.XTN" and ZAP ZAP  
Reviewed**

## GENESIS

FULL DETAILS OF ISSUE 5

**HARDWARE PROJECT:**  
Internal Sound  
Amplifier

Also in issue 15:

- \* New additions to PD Library,
- \* Telephone Helpline,
- \* New resubscription offers,
- \* PD Review,
- \* PD Top Ten.
- \* And much more !

# All Formats Show issue



TECHNOTALK PD LIBRARY HELPLINE GAMES ZONE

## The Gaffer's Bit....

Seeing as this issue of +3 CONTACT will be the one that most visitors to the +3UG stand at the All Formats Fair will be reading, I'd like to welcome any non-members who might be reading this to the +3 Users' Group. I hope you enjoy browsing through this issue, and why not have a quick look through some of the back issues also on sale ... 'where?' you ask? On the table right in front of you! And if you haven't already discovered why the +3 Users' Group is essential to join then please ask someone at the stand to enlighten you.

And now back to a spot of +3UG news...

Last month's 'pilot' version of the CHALLENGE column has got off to a slow start, and so I've decided to extend the closing date for entries until November 15th. Response to the puzzles has been slow, even to the easiest puzzle, which might indicate a general veto of the column by the membership. If you do like the idea, then I'd advise you to dig out last month's issue of +3 CONTACT and get your thinking caps on in order to solve some of the puzzles.

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# News Watch

## Come and see us

As you will have already seen from the leaflet enclosed with this issue of +3 CONTACT, Garner Designs will be exhibiting The +3 Users' Group at the All Formats Computer Fair on Sunday 4th November. Well this is just a reminder that we want to see as many members at the show as possible. They'll be lots to see and we'll be available to answer queries, etc. So please drop and say hello!

## Lifetime drive goes to EEC

The demise of MGT left the future of their Lifetime 3.5" disc drive uncertain for a while. However, those purveyors of hardware bargains at EEC Ltd are now selling the Lifetime drive. At the time of press, we are not sure whether EEC are selling the lead to make the drive compatible with the +3, but as EEC sell Spectrums and Spectrum hardware there is a good probability. EEC can be contacted on 0753 888866, and their address is: EEC Ltd, 18-21 Misbourne House, Chiltern Hill, Chalfont St. Peter, Bucks, SL9 9UE.

## Alternative Micro Show

The fourth Alternative Micro Show is taking shape nicely and promises plenty for everyone who visits. As for Spectrum software producers, Flexibase Software will be at the show showing of their Flexipage program; as will the usual trrong of box-shifters selling Spectrum software at discount prices. The Alternative Micro Show takes place on Saturday 10th November at Bingley Hall, Stafford Show Ground, Stafford from 10am-5pm. Admission is £2 for adults and £1 for children. For more details contact Sharward Services, on 0473 602460.

# +3UG News

## All Formats Computer Fair

As you will have noticed from the leaflet which came with this issue of +3 CONTACT, the +3UG will be exhibiting at the All Formats Computer Fair on November 4th. We're hoping that as many +3UG members will come as possible, as well as using the show to attract more members. We'll be offering discounts on virtually all our wares, including re-memberships, Clip Art discs, tape leads, etc, etc.

We sincerely hope you'll come along to see us, and if the show is a success then we will be attending more shows in the future; the next probably being the All Formats Fair on December 15th.

## BACK ISSUES

After completely running out of stock of back issues a few months ago, we've finally got around to getting some more produced. We've got copies of +3 CONTACT available right back to issue 1, although the print quality of issues 1 to 6 is not terrific. Each back issue costs £1.25 inc p&p, and the contents of each one is as follows:

Issue 1 : +300S routines to type in.

Issue 2 : Another +300S routine to type in, Carrier Command review.

Issue 3 : PCG's DTP package reviewed, hardware project.

Issue 4 : Kobrahsoft's DICE and DBI reviewed, Mandelbrot graphics, listings to type in, CP/M review.

Issue 5 : Reviews of: HiSoft BASIC compiler, Multiface 3, Artist 2. Listings to type in. Mallard BASIC : Self starting discs.

Issue 6 : Reviews of: Operation Thunderbolt, Chase HQ, Masterfile +3. On-Line comms column, +3 Sound Chip manipulation, Mallard BASIC : keyboard programming. Calendar program to type in in ZX BASIC and Mallard BASIC.

Issue 7 : Reviews of: Tasword +3. Mallard BASIC : Screen and Printer control. RAM Page switching, Interfacing your +3. 3.5" Lifetime drive review. On-Line. Book review. Listing to type in.

Issue 8 : Mallard BASIC toolkit. Plus 3 Mate review. On-Line.

Issue 9 : PD scene examined. Course Master review. Mallard BASIC : Line graphics.

Issue 10 : BT Clampdown. Tascalc review. Mallard BASIC tips. Listings to type in.

Issue 11 : DTP companion. Fitting a 3.5" B: drive. PD Review.

Issue 12 : Music Writer review. Knitwear Designer review. Hidden Z80 instructions. On-Line.

Issue 13 : Reviews of: Animator 1, M3 Unlock. Routine to format 3.5" discs to 800K. 1990 Survey results. Artist 2 bugs. PD Review. On-Line.

Issue 14 : Amstrad announces "The +3 is dead". Reviews of: Z80 Toolkit, M3 Unlock. Tape leads to improve loading & saving. The Write Way - how to contribute to +3 CONTACT. External 3.5" drive for under £20? Details of Genesis disczine issue 4.

# GENESIS

Where else can you find a magazine on a disc containing reviews, news, hints, tips and over 100K of top quality programs for as little as £2.25?

Issue 5 of GENESIS is here and after the success of issue 4 in its new-look format, we're sure that you'll enjoy issue 5 just as much. We think we've come up trumps with the free programs we are putting on the disc too, as you can see from the list on the right. However, we are still adding programs right up to the last minute and there should be at least 2 other major programs to add to the list.

Unlike other tape/disc magazines which provide free programs, GENESIS comes with the 'GENESIS BOOKLET' which is an A4-sized guide to using the disc magazine itself and all the programs on the disc. All the instructions are as detailed and provide an excellent insight into using the programs.

As well as the free program we have included in Issue 5, the magazine section contains the following articles:

- All the latest news and views,
- Program reviews,
- Pascal Tutorial - our in-depth tutorial to this excellent language continues,
- News about some of the programs which will be appearing in issue 6 of GENESIS,
- And of course, much much more!

COME AND SEE GENESIS 5 IN ACTION AT THE ALL FORMATS COMPUTER FAIR at the Royal Horticultural Hall, Westminster, London on SUNDAY NOVEMBER 4th.

**GENESIS Issue 5 is available NOW!!!**

PRICE: £4.25 (OR only £2.25 if you supply blank 3" disc).

Please make cheques/PO payable to "NEW ASPECTS" and send your orders to: NEW ASPECTS, 57 Lovers Walk, Dunstable, Beds, LU5 4BG.



## EARN UPTO £100!

We aim to provide everyone who buys GENESIS with not only the best disc magazine available, but also the very best programs around. To help us to achieve the latter aim, we need you to contribute your programs for inclusion on future issues of GENESIS. They must be your own work and you can elect to have them included as public domain software or as copyright protected software. As an incentive, we are offering £100 of prize money each issue which is split between the authors of all the programs which are chosen for inclusion. The £100 is split up according to how good your program(s) is in comparison to others in the same issue - so the bigger and better your program is, the more you get paid for it! More information can be found in issue 5 of GENESIS.

We aim to keep the quality of content high and with your programs, not only can you earn money but you get all the fame and fortune that comes with having your program included in publication which is already attracting over 200 readers every issue.

## DISK CONTENTS

### BASIC COMPILER

This excellent program will convert BASIC programs into fast machine code. It comes complete with full instructions and example programs for you to compile.

### TRAIL RACER

This commercial-quality game an excellent example of PD at its best. Fast colourful graphics and excellent sound (including speech) make this game an instant classic on the PD scene.

### 32x42 Character

This utility enables text to be displayed on the screen, instead of normal 22x32 format. This provides you with a screen. Full instructions are included in order for programmers to use this utility in their own programs.

### 48k RAM DISC

This utility for Spectrum 48k users allows a RAM disc to be set up in memory which allows files to be loaded, saved and erased, just like on the Spectrum 128's RAM disc. A must for any user serious about his Spectrum.

### FORTH

We are currently putting the finishing touches to a complete implementation of the FORTH language which has been submitted to us from one of our European readers. As well as the standard Forth language, routines are built-in to enable full use of the Spectrum's graphics screen, sound chip and printer.

An introduction to the language itself will be included in the Genesis Booklet to enable you to get to grips with the language as soon as possible.



# TECHNOTALK

Radio Comms on your +3 - An article by Gary Stimson and Brian Gaff.

A few months ago, a program called Radio Comms by the weirdly named ONSKN was added to our PD Library (program number 97). Unfortunately, few people understood how to use it, so here's an explanation.

Radio comms is similar to the usual telephone comms, but the data is transmitted over the radio waves. In Britain it is illegal to transmit unless you hold an amateurs' license, so you should only receive. This program allows the following systems to be decoded: RTTY (Radio teletype), Morse and SSTV (slow scan television).

Unlike most other systems, the program does not need a terminal unit because all the unit's functions are performed in software. This means that it's not as reliable as a terminal, but is much cheaper. To decode RTTY and Morse, you'll need a SW radio with a good external aerial that covers 100kHz up to 30MHz, has a resolution better than 100kHz and SSB/CW modes. Ideally, you should be able to fine-tune the radio and it must not drift with time. If it's a digital type, so much the better. Because of the well known atmospheric changes, you may find that certain stations can only be received at certain times of the day. To obtain a good radio, search through the suppliers in one of the radio magazines. To link the radio with your +3, connect the radio's earphone (or external speaker) socket to your +3's tape/sound socket. If the radio's earphone socket is a 3.5mm type, then you can just use the ear (load) plug on your tape leads.

The +3 (and TVs to some extent) are notorious for generating vast amounts of radio "noise". If possible, earth your radio. If you can use a different earth to the mains earth, do so. It may help if you plug your radio into a socket that is on a different mains circuit to the one your computer is connected to, one on the other side of the building or on a different floor should do. You may find that connecting a RFI Choke (available from Tandy) on the +3 power lead, near the computer may help. Position your radio and aerial as far away from your +3 as possible. If things get really desperate, you could try turning your +3 off and recording the signals onto tape. The tape could then be played later with the +3 turned on.

Each of the different modes that the program uses has a page instructions. I

suggest that you print these out, as it can be very difficult trying to remember all the keys and what they do!

Morse, as just about everyone knows, is the system that uses a series of long and short beeps to represent each character. The program works best with Morse generated by another computer, because that pauses will all be the same length. Humans generating Morse must have good timing for the program to be able to decode it properly. Put your radio in the SSB/CW mode and keep tuning until you find Morse transmissions. Alter the pitch until the box at the bottom of the screen pulses simultaneously. The speed should autotrack.

SSTV is a system which can take up to 8 seconds to transmit a low definition picture. There is a SSTV mode, but we've not been able to receive successfully with it as a very clear reception is needed.

RTTY uses the 7 bit Baudot system with the first being the start bit, and the last the stop bit. Amateur RTTY users can often be found on these frequencies: 3950kHz, 14090kHz, 21090kHz and 28090kHz. A clear signal is needed, so the radio should be very carefully tuned. You'll have to guess what baud rate the transmissions are using. The box in the bottom right corner flashes in a special way when you've got the correct reception. A flashing exclamation mark (!) means that there are errors in the stop bit - try using the reverse option in the s/w or returning to the "other side" of the signal. You'll find that when some stations aren't transmitting they continuously send "RYRYRY" or "THE QUICK BROWN FOX...". These signals could be used to help you tune your radio.

Radio hams (and commercial stations) use rather a lot of abbreviations. There is far too many to list, but here are some of the common ones:

CQ - I am calling  
73 - Goodbye  
QRT - Closing down  
QTH - Location  
QSO - A chat or contact  
QRM - Bad noise

I hope that's made Radio Comms more understandable. For further reading, try getting hold of one of the radio magazines. The New Hackers Handbook also has a good section on Radio Comms that you may find useful.

# TECHNOTALK

## INTERNAL +3 SOUND AMPLIFIER

Ever thought how nice it would be to have an in-built amplifier and loudspeaker with a volume control for your +3? This can greatly improve the sound quality and eliminates that terrible buzz on some televisions.

Here's how it can be done using a small home built amplifier fitted inside your +3 driving a 2" diameter loudspeaker also mounted internally. A small volume control knob fitted to the left hand side of the keyboard is the only external component. Apart from a small hole for this control, no damage is done to the casing and the sound emits from the ventilation holes at the rear of the +3.

If you do not feel inclined to build your own amplifier, Maplins supply an amplifier kit designed around the 386 integrated circuit for about £3.50. Their catalogues are available from W.H.Smiths.

Like Mr Chang's article in issue 14, this modification does require you to remove the computer's top with the hazards involved but providing you have a basic electronic knowledge, soldering skills and take care there should be no problems.

The first job is to build the amplifier as per my circuit on a 2" by 1.25" Veroboard (or buy the Maplin kit), couple it up to the loudspeaker and volume control and test it out with a 9 volt battery. The circuit will work from a 4 to 12 volt supply. A simple test is to hold the input by the fingers which should produce a pronounced buzz which can be turned up or down with the volume control.

When you are happy that all is well you can start on your Spectrum.

Disconnect the power supply and remove the 7 screws fixing the top on your +3. Remove the top and disconnect the lamp cable plug and the ribbon plugs for the keyboard marked X and Y. Note which way round they fit. You will now find that there is plenty of room for the loudspeaker and amplifier next to the disc drive. There is no need to damage the main board since the amp and speaker being light can be stuck onto it with double-sided Sellotape sticky fixers.

A small hole needs to be drilled in the case top next to the keys as shown, for the volume control and its associated components.

The loudspeaker being only 39 grams in weight can be mounted on its magnet facing upwards but I have encased it in a small tin as shown which provides a baffle increasing the sound quality and output. It is not recommended to use a speaker with an 'open' magnet which gives a strong magnetic field. The Maplin speaker type 508 gives negligible external field.

The input is taken via C1 from the tip of the Tape/sound socket at the rear (see page 317 in the +3 manual). This can be reached more easily at one end of R62 which is nearby. Lightweight screened cable should be used to couple the input from the +3 to the volume control and again to couple to the amplifier board. Leave ample lead to allow easy fitting.

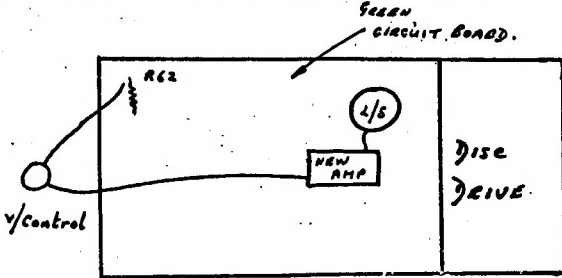
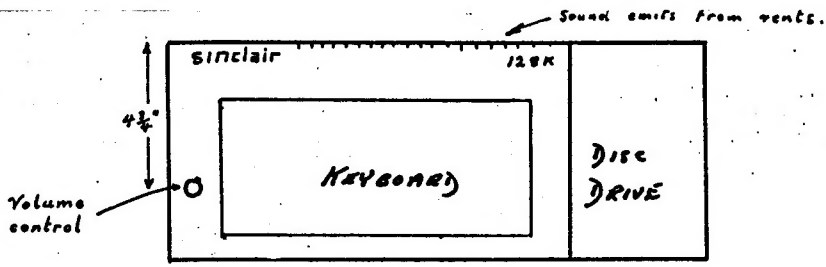
A supply of +12 volts and 0 volts can be obtained from the circuit board near to the main power input plug.

You are now ready to assemble again for testing making sure that the new components do not catch when the top is fitted. All being well you can now forget all about those problems of accurate tuning of the TV and the accompanying BUZZ.

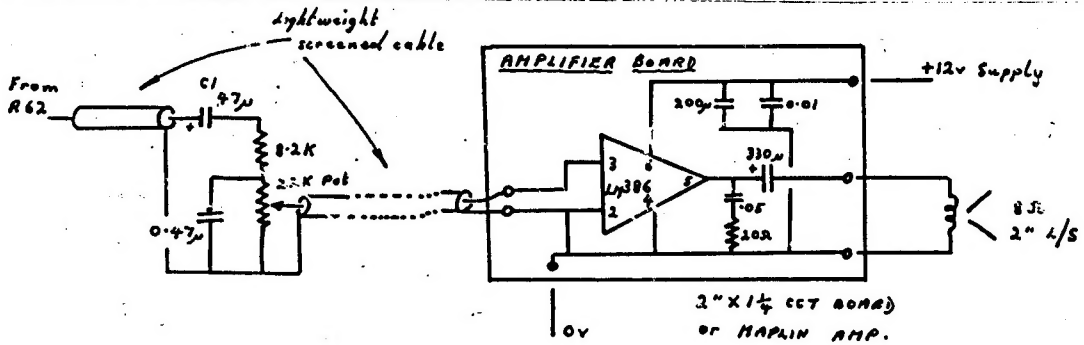
### Component List Using a Maplin Kit:

Maplin L386 Kit Amplifier complete with instructions - Maplin LM76H (Kit) or GD68T (PCB)  
22K Standard log potentiometer - Maplin FW23A  
47 micro Farad 10V capacitor  
8.2K .25W resistor  
2" 8 ohm Loudspeaker, Maplin type W608J  
2ft twin overall lapped screen cable - Maplin XR20W  
0.47 micro Farad capacitor  
Small knob - Maplin FE75S.

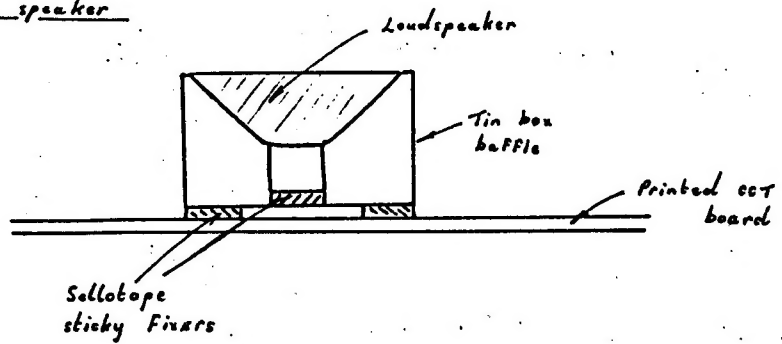
TOTAL COST ABOUT £6.



VIEW OF CIRCUIT BOARD SHOWING POSITION OF NEW COMPONENTS



Tin box mounting for speaker





# Helpline

In last month's feature-filled issue, J.R. Cleveland was discussing using M3 Unlock to make the Artist II use a Genius mouse when it loads, instead of having to use the keyboard to select mouse. He also said "No doubt there's someone who knows how to poke the code to achieve this desideratum, but until such time as he puts his head over the parapet and lets on to the rest of us, we'll have to resort to cheat methods". This set me thinking about how to "achieve this desideratum", and I quickly worked out a method, and here's how to do it (in the immortal words of YS - "Oo-er!"):

1. Load Artist II (bit obvious really!)
2. Use the keyboard to select mouse control, in the normal way. If you'd like Artist to use Joystick on start-up, then select joystick instead.
3. If you'd like Artist II to start with a clear screen instead of the loading picture, then select "clear" from the screen menu.
4. Now, pull down the storage menu and select "BASIC".
5. Make sure that the Artist II disk (or better still, a backup of it) is in the drive, and not write protected.
6. Type MOVE "ARTCODE.BIN" TO "BACKUP.BIN", this could be moved back to ARTCODE.BIN if you ever wanted to restore the old system.
7. Now type SAVE "ARTCODE.BIN" CODE 26096,39440 and all should be well.

The most maddening bug in disk version of Artist II is the way that the disk drive fails to stop after loading or saving screens. This is fairly easy to fix, so it makes you wonder why Softechincs didn't bother. Here's a step-by-step method to fixing that bug:

1. Enter +3 BASIC, and insert your write enabled Artist II disk.
2. Type MERGE "BASIC"
3. Type in the lines below:  
65 INPUT "FILENAME (JUST ENTER TO RETURN)" LINE A\$: IF A\$<>" " THEN RETURN  
66 RUN  
74 LOAD A\$ CODE B: GO TO 100  
84 SAVE A\$ CODE B,C: GO TO 100  
94 VERIFY A\$ CODE: GO TO 100  
100 RANDOMIZE USR 14495: RUN
4. Delete line 99 (ie, just type 99 then ENTER).
5. If you don't have an AMX mouse, then delete line 98. This will stop the computer asking whether you've got one when Artist II loads.
6. Type SAVE "BASIC" LINE 98 (The old version is automatically renamed to BASIC.BAK)

John White has been delving deeply into his +3, and has once again emerged with a list of interesting tricks 'n' tips. Here's a few RANDOMIZE USR calls to try:

USR 3485 - Performs a NEW

USR 3520 - Fast CLS

USR 3330 - Scrolls the screen up 21 lines. He says that you can take off 1 to make it scroll 20 lines, take off 2 to make it scroll 19 lines, etc.

Next month he'll have some great POKEs for you to try (if I remember).

If you've got any +3 problems, hints, or tips then send them to: Gary Stimson, 4 Fox Covert Drive, Roade, Northants, NN7 2LL. Enclose a sae for a speedy reply. Help me to help you - send all the relevant info; including any commands that you've tried, listings, even photocopies of the manual if it's a hardware problem, that way I can pinpoint the problem more easily.

The Telephone Helpline is open on Wednesdays and Fridays between 2pm and 4.30pm only. Call (0582) 472067, it may help if you're sitting in front of your +3 when you call.



# Telephone HELPLINE



The +3UG's new telephone helpline service has been a resounding success in the short time that its been in operation. So much so that I've decided to include a Telephone Helpline column in +3 CONTACT every month with a selection of the queries we've dealt with in order to stop people ringing us with the same questions every week.

Firstly, Artist II seems to be the most bug-ridden piece of +3 software available at the moment. We have published a number of patches to get various things in the program working correctly, but we have been alerted of yet another inconsistency in the software. D.C.Bowen rang us to say that he couldn't get a sensible output on his Brother HRS printer from the Artist II's print options.

At first glance it appeared that it was the HRS's inability to recognise some Epson control codes which was at fault. However, after a bit of disassembly and detective work it seems that the fault really lies with some sloppy programming by Bo Jangeborg (or whoever did the +3 version of Artist II). The programmer assumed that all Epson 'compatibles' could recognise the ESC \* control code which allows direct graphics printer mode selection. For example, 'LPRINT CHR\$ 27; "\*"; CHR\$ 1; CHR\$ 100; CHR\$ 0;' does exactly the same thing as 'LPRINT CHR\$ 27; "L"; CHR\$ 100; CHR\$ 0;'. However, although the later method is recognised by all Epson compatible printers (except some of the early prehistoric Epson models) printers, the former method is not recognised by the HRS (and several other printers too).

Therefore, Artist II was failing to put the Brother HRS into graphics mode before sending all the graphics data. The result was a page-full of utter rubbish being printed.

The answer to the problem is the following list of POKEs which can be incorporated into the Artist II's basic loader program (loaded using MERGE "DISK").

95 POKE 65023,10, POKE 65005,32, POKE 65006,32, POKE 65014,32,  
POKE 65015,27, POKE 65016,76, POKE 23354,62, POKE 23355,16, POKE  
23399,20

Re-save the basic program using SAVE "DISK" LINE 10.

## TELEPHONE HELPLINE

The Telephone Helpline is open for business on Wednesday and Friday afternoons from 2pm until 4pm. Please have as much information in front of you as possible so that we can deal with your query quickly and accurately. Please do not call outside these times as there won't be anybody around to answer your query. Also, don't be discouraged by an engaged tone, the Helpline has been very busy, but please keep trying.

# HOW TO CONTACT US

A slight bit of confusion has begun to creep in about who to contact concerning several of the +3UG's services, so here is all the information you need.

- GENERAL ENQUIRIES - ARTICLE CONTRIBUTIONS -
- MEMBERSHIP RENEWALS - GARNER DESIGNS -
- MAIL ORDER SERVICE - GENESIS -

**Address:-**

GARNER DESIGNS,  
57 Lovers Walk,  
Dunstable,  
Beds,  
LU5 4BG.

Tel: 0582 472067

Fax: 0582 696114 (Mark Faxes to the attention of D.Garner)

- PD LIBRARY - POSTAL HELPLINE -
- TAPE LEAD ORDERS -

**Address:-**

Gary Stimson,  
4 Fox Covert Drive,  
Roade,  
Northants,  
NN7 2LL.

- ON LINE HELPLINE -

Micronet - MBX 582472067, Aspects (Tel: 061 792 0260, format: scrolling 8n1) - MBX "Daniel Garner".

We try to answer all queries sent via e-mail on these services within 36 hours.

- TELEPHONE HELPLINE -

Tel: 0582 472067

The Telephone Helpline is only open at the following times: Wednesdays and Fridays from 2pm until 4.30pm.

# Disc Management System

**DISC MANAGEMENT SYSTEM** By Kobrahsoft £12.95

Kobrahsoft's 'Disc Management System' (or DMS for short) is aimed at all those people who have a large collection of discs and have great difficulty in remembering exactly what is on each disc. In short, DMS will help you keep track of which files are on what discs.

You load the disc from the loader and are presented with a +3 type menu which allows you to either load the index (this includes a DOS utility), or just load the DOS utility itself.

## 1 The Index

The program is easy to use and the keys are self explanatory. Discs are numbered from 0 to 999 and can be suffixed with either 'A' or 'B'

to represents which side of the disc you want to see. So you can have details of the contents of upto 1000 discs in the index (i.e. 2000 sides). They are numbered 000A to 999B. The screen is broken down into 3 windows. Window 1 is the main one where a disc's contents are listed (16 programs are listed at any one time and the cursor keys are used to scroll through the list). It is like:

```
000A ANYNAME.TXT 22K
000A FREDBLOG.COD 34K
```

The maximum number of files that the index can handle is 4095. Window 2 displays information and various menus (see below), it also shows you the date of the last time the current

disc's index was updated. Pressing the Space Bar takes you to various menus. Window 3 is the message window which displays error messages and such like.

The menu options in window 2 are as follows:

### Find

This is divided up into three parts. First 'disc', this will let you find a particular disc i.e. 030B and will show the contents and how much free space you have on that disc. 'File' allows you to find a file, a process which is very quick. When each character is typed in it goes through a search so you may only have to type a few characters and you may

INDEX		© 1990 KOBRAHSOFT		▲▲▲▲
Disks 63	Files 848	View=		
000A D	. 7K	Disk		
000A DISK	. 1K	Disk=		
000A DMS	. 1K	000A		
000A I	. 12K	118K		
000A INDEX	. 1K	Free		
000A INDEX	.BAK 15K			
000A INDEX	.IDX 15K			
000A MENU1	. 1K	Last		
000A MENU2	. 1K	Saved		
000A SET	.IDX 1K	14 Jul		
000B D	. 7K	1990		
000B DISK	. 1K			
000B DMS	. 1K			
000B I	. 12K	SPACE=		
000B INDEX	. 1K	MENU		
000B INDEX	.BAK 8K			

see the file you were looking for. 'Space' is for seeing how many files and how much space there is left on a particular disc. It starts with the first disc in the index, for example '000A 10 Files 20K' means you have 10 files and 20k left on side 000A disc.

#### Update

This allows you to update any of your discs. You may have added files to a disc. It will ask you which disc do you want to update. You then enter the number of that disc and it automatically updates the index.

#### Insert

This allows you to enter information manually, this is useful for some commercial games discs which cannot be catalogued normally. You have to enter all the details i.e. name,size,etc.

#### Remove

This is a good facility where you can remove an individual file or disc from the index.

#### Print

Here, you have three sub menus. 'Disc' will let you print out all files in disc order. 'File' will let you print out files in ASCII order and 'Space' lets you print out a list of all disc files and how much space you have left on each disc contained in the index. It uses the +3 Centronics printer port and gives instructions etc in the manual.

#### Load

This option allows you to load the index file.

#### Save

This allows you to save the current index you have been working on and asks for the current date.

### DOS Utility

You can use this without the main index program being loaded. When used on its own the program is resident on M1 drive and can be recalled as long as it is not erased or the computer switched off.

Now some of the DOS utility's menus:

#### Dir

This reads the directory of the current disc in the drive. It displays the files in window 1.

#### Format

This option allows you to format a disc to three formats, 173K +3 format, 2 - 169K (CPC) 'System' format and 178K DATA format.

#### Copy

This allows selected or all the disc files on a disc to be copied from one drive to another.

#### Erase

This works in the same way as the Copy option but files are erased instead.

#### Rename

This allows you to rename a program that the cursor is on.

#### Attr

This allows you to change the file attribute (e.g. PROT, SYS or ARC) of a program that the cursor is currently on.

#### Header

This allows you to examine the header information of the file that the cursor is currently on to see what type of file it is i.e. BASIC, code, etc.

#### Setup

This allows you to change the colours of the various windows and the border and save them so when you load the program next time you have those colours. You can do this on both the index and DOS menus.

There are also 2 other programs on this disc which are called Menu 1 and Menu 2. These allow you to set up a menu for a particular disc.

INDEX @ 1990 KOBRAHSOFT <b>AAAA</b>	
2 Files      178K Free	
INDEX .      7K	P3D05=
INDEX1 .     7K	Ver1.0
	File=
	No:2
	ENTER=
	SELECT
	DEL=
	CLEAR
	SPACE=
	MENU
INDEX1 .	

This cuts out a lot of the hassle of loading disc software and is a welcome feature.

So what do I think about this piece of software? Well it is good and fast for checking which files is on that particular disc. Of course you can only use this for drive A, which is a pity as I have a 3.5" disc system for drive B, and would have been nice to use the index system for those discs. To load the index program you have to use the master disc as it as been protected. You can use another disc to store your index on and load it back into the system. The DOS program can be copied to another disc if you only want to use that program.

So for those with a large disc collection who find the job of finding a particular file a time consuming job, then Kobrahsoft's 'Disc Management System' is a first class product.

DMS costs £12.95 on disc from Kobrahsoft, 'Pleasant View', Hulme Lane, Hulme, Longton, Stoke-On-Trent, Staffs, ST3 5BH.

KEN DAVIES

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# ZIP ZAP

You can place Zip-Zap into the category of disc sector editor along with DICE and Plus3Mate. It's been around for some years now, infact it came out not long after the +3 did.

It came supplied on 3" disc along with a 14 page A4 set of instructions. The instructions are divided into 5 chapters, each subdivided into further sections dealing with the functions available.

On purchasing Zip-Zap you are allocated an issue number exclusive to your copy. This should be quoted in all correspondence.

Following the customary 'read the manual first' you are requested to load the "ReadMe" file on the disc. This tells you of any late alterations to the program or ammendments to the manual.

Section 1 of the manual deals with the basics of Speccy DOS, explaining the fundamentals of Bits, Bytes, Buffers, Memory etc. It eases you gently into the strange world of DOS.

Section 2 goes deeper into the DOS via DFCBs, XDPBS and logical sectors, again, it's a good tutor, explaining clearly and concisely.

Section 3 takes you into the start up procedure for ZZ. How to decode the screen display and how to do a "cold" or "warm" start are all adequately described.

To discover what functions can be accessed by what keys entails the reading of chapter 4. The summary of what's available is spread over 4 pages, offering you a wide range of commands at your disposal. Among these are read/write to/from a disc, search, swap

bytes, search for ASCII, alter the buffer contents, change the XDPC, hex to dec and vice versa or print out a whole screen full of information.

A short tutorial on the use of ZZ can be found in chapter 5. This has you typing in a short program, erasing it then recovering it again. Whilst simple examples, they serve to give a working insight into the practical use of ZZ, ideal for the novice.

A general overview of ZZ is that it's a competent enough program, it doesn't quite stand up to the current competition. It does score a point in that you can print out screens full of code for your perusal.

Included on the disc is a "SUPERCAT" program, however, to gain access to this requires that you send off £2.50 for the "key" to unlock it. An open invitation to hackers??? (A useable version of 'Supercat' was printed in Computer Shopper magazine a year or so ago. Ed.)

I'm afraid I can't give you any details on prices etc for the simple reason that Omega Software have failed to reply to two letters, despite the inclusion of SAEs. Maybe they've gone bust, anybody any ideas!! Perhaps you could obtain a copy through the small ads.

Following my request last month for the OCP programs I was inundated with offers (well, two actually). A big round of applause to a Mr Chris Clayton of Carlisle who contacted me on the day of publication and offered the +80 Finance Manager. An even bigger round of applause and a double gin and tonic to.... Mr X. a chap who phoned and offered the full set of four programs free gratis. I don't want to go into any details other than the programs are in pristine condition and come with full documentation. Many thanks Mr X.

I've managed to alter the save/load syntax to enable disc access but the print out still eludes me. I think i'll get in touch with +3 Contact's Helpline!!

A good source of software came to me via Mr Clayton, being FLEAM SPECTRUM SOFTWARE HIRE who offer a good range of Speccie software, both games and utilities at a very reasonable hire rate. It's worth getting in touch. Phone (0602) 215921 for further details (I have a sneaky suspicion that software hire companies now contravene the new copyright laws. Tut tut. Ed.)

Black marks to the Post Office for losing my mail. They've lost a parcel of back issues of "FORMAT" and I didn't get my "+3 CONTACT" until 29th Aug. It's just not on.

Next month i'm hoping to have an article about piracy with an interview with Bob Hage of FAST. Until then.....

BARRY WALTON.



# MUSIC WRITER



*Garry Rowland's MUSIC WRITER - the three-part score-writing system for 128K Spectrums - was first reviewed in +3 Contact issue 12, with supplementary information in issue 13. In this update, J.R. Cleveland reviews a new software utilities add-in.*

The first extension program for loading into MUSIC WRITER has just been launched. Called UTILITY.XTN, it adds a number of useful block-handling utilities to those already provided, and is accessed via the two XTN icons in the MUSIC SHEET screen. The smaller of these (Fig. 1)



Fig. 1

is used to load UTILITY.XTN from tape or disc, whereafter the larger icon (Fig. 2) is SELECTed to open up the UTILITIES window (Fig. 3)



Fig. 2

which menus the new functions. The last option - XTN COPY - transfers UTILITY.XTN from the supplied cassette to the currently selected drive (A: B: or M:).

The TEMPO option sets the tempo of all the bars in the marked block to that specified in the TEMPO icon (Fig. 4). To appreciate the significance of this, it is necessary to recall that in MUSIC WRITER itself, tempo is assigned to each bar individually rather than to the music as a whole, so that although you can switch tempo from one bar to the next, you can't alter the tempo of more than one bar at a time. The new TEMPO utility enables these individual bar tempi to be overridden by a single tempo for the whole of the specified block.



Fig. 4

Similarly, the VOICE, VOLUME and AUTO BEAT options assign these attributes (once they have been set in the BAR EDITOR) to whole blocks rather than to individual bars or notes.

Lastly, the TRANSPOSE option allows any or all of the three parts (whichever is currently SELECTed) to be transposed to a specified key by up to a maximum of 7 semitones or 3 pitch names. Thus as illustrated in Figure 5, C will transpose upwardly to F but downwardly to G. Larger transpositions, such as from C upwards to G, can be accomplished in two steps as shown. Accidentals are automatically adjusted to preserve intervals as illustrated in Figs 6a and 6b opposite which show transposition of a chromatic scale fragment from a nominal key of C (Fig. 6a) to E (Fig. 6b). Figs 7a & 7b illustrate what happens when transposition results in some notes falling outside the two-octave range of the stave - when the arpeggio in Fig. 7a is transposed up a 4th, the last two notes are automatically dropped an



Fig. 7a

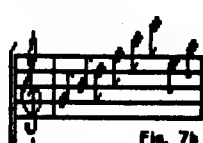


Fig. 7b

octave to keep them within the allowed range (Fig. 7b). Transposition has two uses - to alter pitch according to taste, and to cater for the notation of "transposing instruments" such as the clarinet and horn.

If you already have MUSIC WRITER, you'll welcome the extra flexibility added by UTILITY.XTN. It is supplied on cassette only and comes together with its own chapter for insertion into the manual.

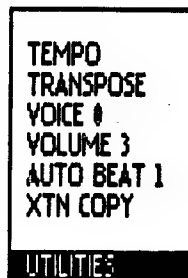


Fig. 3

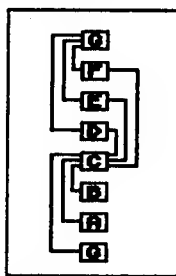


Fig. 5

Normal prices are as shown in the box below, but keep an eye open for special offers to +3UG members. People who ordered Music Writer before 29th June 1990 and now order UTILITY.XTN also receive free an updated Music Writer cassette plus a few extra replacement sheets for the manual containing minor additions, including an acknowledgment of the mouse interface problem described in +3 Contact issue 13.

UTILITY.XTN	£6.00
MUSIC WRITER	£21.95
both together	£26.95

Prices include post & packing

order from -

G. Rowland  
P.O. Box 49  
DAGENHAM  
Essex  
RM9 5NY



Fig. 6a

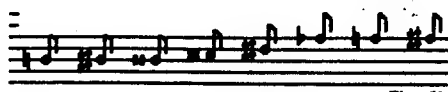


Fig. 6b



# Resubscribe!

If your +3UG subscription is coming to an end, you should have received a letter with this issue of +3 CONTACT to inform you and so here's how you can resubscribe to +3 CONTACT and all the +3UG's services (with the usual splattering of special offers thrown in for good measure too).

1 years subscription - £10.00 (Now normally £11 to new members)

## SPECIAL SUBSCRIPTION OFFERS:

1 years sub + "TASWORD +3" wordprocessor - £28.24 (A MASSIVE saving of £6.75!)

1 years sub + Magnum Light Gun + 6 games - £32.50 (A Saving of £7.49)

1 years sub + 10 Maxell/Amsoft 3" discs - £31.00 (A MASSIVE Saving of £8.99!)

1 years sub + RAINBOW V20 (The Star LC-10 colour printout utility) - £15.95 (A Saving of £1.00)

1 years sub + Spectrum +3 Dust Cover - £13.90 (A Saving of £2.10)

N.B. These special offers are valid until 16th November 1990.

So if your subscription runs out next month or in the next couple of months then make sure you resubscribe to ensure your supply of the best and only Spectrum +3 magazine and the use of the largest Spectrum +3 PD library this side of Saturn.

Eds note: Members visiting the All Formats Computer Fair on November 4th will be able to resubscribe there.

# +3 Users Group Mail Order

THIS MONTH'S SPECIAL OFFERS

## 1 TASWORD +3

The ultimate word processor for the Spectrum +3. A mass of features are included, such as 60K document length, full text formatting, 64 character display, full print out options, data merge, and built-in help facility. A must for all +3 users.

Description	RRP	Our Price
TasWord +3	24.99	18.99

## 2 TASCALC +3

This spreadsheet program has hundreds to uses, from accounting for small business to home accounts and such like. A whole wealth of features are included, such as statistical graph output and a massive 64K data capacity.

Description	RRP	Our Price
TasCalc +3	24.99	18.99

## 3 KLAX

Domark's smash hit 'KLAX' is one of those 'just one more go' games. Its easy to play, but difficult to master, and completely addictive. All this and great arcade-style graphics make Klax a must for the 'thinking' games player.

Description	RRP	Our Price
KLAX disc	14.99	11.50

## 4 PIPE MANIA

Race against time in this frantic game of skill and plumbing! Lay a long-enough pipe or else the flood will flood out! Warning: this game is VERY addictive. You'll still be playing this game this time next year!

Description	RRP	Our Price
PIPE MANIA disc	14.99	11.50

## 5 DUST COVER

Keep your +3 clean and safe in this smart high quality dust cover.

Description	RRP	Our Price
DUST COVER +3	5.99	4.90

## 6 MAGNUM Light Gun

The official Spectrum lightgun, as used by Amstrad. Point the gun at the screen and shoot! Comes with 6 great games.

Description	RRP	Our Price
Lightgun +3	29.99	23.00

# Mail Order

THIS MONTH'S SPECIAL OFFERS

## 7 3" DISCS MAXELL/AMSOFT BRANDED DISCS

We supply only the highest quality 3" discs, not the cheap unbranded ones which tend to fall apart or corrupt easily. Not only do you have the assurance of buying quality discs from us, but you also have the assurance that we obtain them from SJB Discs who are Amstrad's main UK distributor for Amsoft 3" discs. Each disc is individually certified, attractively packaged and comes with a lifetime warranty.

Description	RRP	Our Price
10 x 3" discs	29.95	21.61

### HOW TO ORDER

Ordering any of the above things is simple, just write stating what you wish to order enclosing a cheque/PO/bankers draft made payable to "NEW ASPECTS".

N.B. Please add £1.50 to the total price of your order to cover postage and packing.

Goods despatched next day (subject to funds clearance).

Post your order to:  
NEW ASPECTS,  
57 Lovers Walk,  
Dunstable,  
Beds,  
LU5 4BG.

All goods sent by first  
class post.  
Please allow 14 days for  
Delivery.

### REMEMBER!

Add £1.50 to your order to cover postage and packing.

# GAMES ZONE

Welcome to another Games Zone providing you with the latest games information which the other magazines don't tell you.

## RELEASE SCHEDULE

DAYS OF THUNDER	T/D	9.99/14.99	OCTOBER 31	MINDSCAPE
ORIENTAL GAMES	T/D	9.99/14.99	OUT NOW	MICRO STYLE
RICK DANGEROUS 2	T/D	9.99/14.99	OCTOBER 16	MICRO STYLE
TEENAGE MUTANT HERO TURTLES	T/D	12.99/16.99	NOVEMBER 21	IMAGE WORKS
THE CHAMP	T/D	9.99/14.99	OCT/MID OCT	LINEL
WHEELS OF FIRE	T/D	14.99/24.99	OCTOBER 24	DOMARK

## SPECTRUM FULL-PRICE CHART

				RATING	
1	SHADOW WARRIORS	OCEAN	9.99	7	
2	BACK TO THE FUTURE 2	MIRROSOFT	10.99	7	
3	TURRICAN	RAINBOW ARTS	9.99	9	
4	ROBOCOP	OCEAN	9.99	9	
5	CHASE HQ	OCEAN	9.99	8	
6	LORDS OF CHAOS	BLADESOFT	9.95	8	
7	MIDNIGHT RESISTANCE	OCEAN	9.99	8	
8	SIM CITY	INFOGRAVES	12.99	10	← This month's "BEST BUY"
9	MANCHESTER UNITED	CHRYSLIS	9.99	7	
10	RAINBOW ISLANDS	OCEAN	9.99	8	

## SPECTRUM BUDGET CHART

				RATING	
1	SOCCER DOUBLE	E&J SOFTWARE		6	
2	RUN THE GAUNTLET	HIT SQUAD		7	
3	QUATTRO ADVENTURE	CODE MASTERS		7	
4	QUATTRO COMBAT	CODE MASTERS		7	
5	GUARDIAN ANGEL	CODE MASTERS		6	
6	RASTAN	HIT SQUAD		7	
7	ROAD BLASTERS	KIXX		5	
8	PRO BOXING	CODE MASTERS		6	
9	TREASURE ISLAND DIZZY	CODE MASTERS		8	
10	MATCH DAY 2	HIT SQUAD		9	← This month's "BEST BUYS"

Both the charts on the opposite page were supplied by New Aspects, who are providing the +3UG with its mail order service.

All the games in the full price chart are available at our standard 10% discount from the prices listed opposite, while the games in the budget chart (which all retail for £2.99 each) are available for £2.49 each. The rating shown is based upon our opinion on how each game is, and we also take into account the reviews each game has received in the Spectrum games magazines.

We stock a large number of Spectrum games (on tape and disc) and accessories, and some of our special offers will be printed in each issue of +3 CONTACT (see page 18).

**N.B. Remember to add 50p to your order to cover postage and packing.**

## BEST BUY

Each month we will be giving a mini review of the game we consider to be an essential purchase to Spectrum gamesters. This month's best buys are SIM CITY and MATCH DAY 2, and we will be giving you an insight into SIM CITY as it must surely be one of the best games available at present.

**SIM CITY** Price: £12.99 (tape)/£17.99 (disc)

In the current crop of fast action shoot-'em-ups a game which is just as challenging but is less frantic is a welcome relief. Sim City is just such a game, and being a mainly 'thinking' game it will appeal to all games players.

The game puts you in the job of city planner in which you must build and shape the continuing future of a major city. Along the way you must provide facilities for the populous as well as setting things like taxes. Building roads and communications links are also essential for development as is keeping the crime rate down.

Sim City features some good graphics which show a plan view of your city as it develops. Gameplay is excellent and you'll soon find yourself enthralled in the game and totally immersed in the strategic elements of the game.

Although £12.99 or £17.99 for the disc version is a bit more expensive than most games at the moment, Sim City is excellent value for money considering the depth of playability and the lasting interest that the game generates. And remember, if you order the game from us you can get Sim City for only £11.69 (tape) or £16.19. Our fast delivery also means you'll only need to wait a couple of days to receive Sim City not weeks.

# PD Review

## Brian Gaff's +3 Disc Utilities

Brian Gaff, editor of the Spectrum area on Micronet is no stranger to the Spectrum scene by any means, and the popularity of his PD programs in the +3UG's library is a testimony to his programming expertise too. We have only printed two PD Top Ten lists so far but two of Brian Gaff's programs have been in the to 5 in both of them.

The most popular of Brian Gaff's programs are his small disc utilities, they are programs 3, 4, 5, 6, 7, 8 and 9 in the +3UG PD library. All are relatively simple in design because all they do is use a small program to access some of the +3DOS routines.

Menu/Cat Utility (No 3) is one of the most popular programs available at the moment. It allows a menu to the front of your discs to enable files to be loaded easily.

Programmers may like to get their hands on the Boot Sector Modifier (No 4) which allows a disc's boot sector to be examined and changed at will. Most users won't ever find a use for the utility, but in certain circumstances programmers may like to obtain this program rather than write their own.

Headload (No 5) and Headcopy (No 6) are ideal programs for hackers because when used in conjunction they allow virtually any file to be examined. For example, protection methods exist to make BASIC programs crash when BREAK is pressed and unMERGEable, thus making examination of them hard (except for the crude COPY "filename" to SCREEN\*). However, using Headload you can change a disc file's header data. So you could for example, change a file's header data so that instead of the +3 recognising it as a BASIC program it is recognised as a machine code file and so can be loaded to any memory address and examined either by a Multiface or resaved.

CATALL (No 7) is a simple program which allows all 16 user

areas of a disc to be displayed or printed out. This can be a very useful program if you keep hard copies of the catalogues of all your discs to remind you what's on them as the program makes the process fully automated.

Parameters (No 8) is another of the more popular Brian Gaff programs. Originally written to make operation of an external 3.5" drive quieter, the program not only does this to the internal 3" drive, but it also makes disc operations (e.g. LOAD, SAVE, ERASE) much quicker. Couple this increased speed with a disc formatting program such as Hi-Format (which also speeds up disc operations) and you have quite noticeable speed differences. You'll never be satisfied with un-Parametered 173K discs again!

Set Default Utility (No 9) is a mouthful of a title, but this utility is extremely useful for external 3.5" disc drive users. The program uses one of the +3DOS routines to set the 'path' for all future disc operations to a specific user area on the disc. So for example instead of typing SAVE "SA:PROG", you could use this utility to set the default user area to 5, then SAVE "A:PROG" would automatically save the program on user area 5.

The nice thing about this utility is that because it uses the +3DOS routine, it also 'fools' commercial software and so to stop your 3.5" discs being crowded with hundreds of files on user area 0 you can use the utility to direct files from certain programs to certain user areas. You could for example use the utility so that Tasword files are directed to user area 5, while your programming files are always kept on user area 2.

So if you haven't got a copy of these utilities yet, then I recommend that you obtain them. You'll wonder how you ever managed without them.

# PD Software List

No.	Title	Author	Type	K	Description
1.	Noughts and Crosses	Gary Stinson	BASIC	12	Can you beat your computer at such a simple game?
2.	Revise!	Gary Stinson	BASIC	5	This program could prove invaluable if you're learning a language
3.	Menu/CAT Utility	Brian Gaff	BASIC	8	Allows you to perform file operations with ease
4.	Boot Sector Modifier	Brian Gaff	BASIC	2	Allows you to alter a disk's boot sector... Use with caution!
5.	Headload	Brian Gaff	BASIC	2	Alters a file's header (eg. BASIC to a/c). Great for hackers!
6.	Headcopy	Unknown	BASIC	2	Copies tape headers to disk
7.	Cat All	Brian Gaff	BASIC	3	CATs all 16 user areas of a disk, including hidden files. Print option
8.	Parameters	Brian Gaff	BASIC	1	Sets the disk drive parameters to make it faster and quieter
9.	Set Default Utility	Brian Gaff	BASIC	1	Lets you set the default user area in BASIC - normally not possible
10.	April Menu!	Gary Stinson	BASIC	2	Displays a fake +3 main menu, which could be altered as required.
11.	CAT	Daniel Garner	M/C	2	Stores a disk catalogue for use in your own programs.
12.	K Free	Daniel Garner	M/C	2	When called, returns with the number of K free on a disk.
13.	REMSore	Chezron Software	BASIC	12	Stores upto 7K of code in a BASIC REN statement. Great utility!
14.	Axel F	Daniel Garner	BASIC	3	Excellent 128K only version of the famous tune.
15.	BASIC Compressor	Daniel Garner	M/C	6	Compresses BASIC programs by putting VAL "" around numbers.
16.	Screen Planner	J Rimmer	BASIC	9	A collection of routines to access the screen
17.	Sort Demo	J.Rimmer	BASIC	5	Timed demo of 7 useful sorting routines
18.	Firescroll	Paul Clavett	M/C	14	Great scrolling terminal software for the VTIX5000 mode
19.	Fireview II	P.Clavett & K.Beddoe	BASIC	27	Excellent viewdata (Micronet style) terminal software for the VTIX5000.
20.	Fire	Unknown	BASIC	3	Transfers Editor frames to Fireview and vice-versa
21.	Fireview 2 Convert	Unknown	BASIC	4	Sets up program 19 to your liking (character sets, etc).
22.	Prognail	Keith Beddoe	M/C	5	Allows VTIX5000 users to send programs via Viewdata mailbox
23.	Softnail	Keith Beddoe	M/C	5	Receives programs sent with program 22.
24.	Date 2 Day	David Wilson	BASIC	3	Tells you the day of the week for a 29th Century date.
25.	Ultra Clear-A-Screen	Owen Brown	M/C	3	Super fast machine code clear screen routine!
26.	Label Maker	Keith Pirie	BASIC	3	Stores names and addresses for label printing.
27.	TV Trivia	Keith Pirie	BASIC	32	Telly quiz with different categories for upto 4 players.
28.	The Earth	Owen Brown	SCREEN#	7	Good piccy of our own planet, viewed from space
29.	Sunset	Owen Brown	SCREEN#	7	Peaceful sunset screen
30.	Secureit	Daniel Garner	BASIC	6	Makes numbers in a program appear differently to a hacker.
31.	AutoSecureIt	D.Garner & G.Stinson	BASIC	2	Fast automated version of program 30
32.	Logo	Owen Brown	BASIC	1	Simple program to create interesting screens (not a LOGO language)
33.	Vector 3D	Owen Brown	BASIC	4	Allows you to experiment with vector graphics
34.	Other Worlds	Geoff Wearmouth	BASIC	31	A selection of screens with a screca editor
35.	Varisave	Chezron Software	BASIC	7	Enables more than one array to be saved at a time
36.	SpinIt	Daton Software	BASIC	23	A great block spinning puzzle game
37.	Multi-Flash	Paul Monaghan	BASIC	1	Psychodelic attribute scrolling!
38.	Tran 48	Paul Monaghan	M/C	1	Use in your own programs to enter 48K mode without the error message
39.	Super Input	Paul Monaghan	M/C	1	Machine code input routine for use in your own programs.
40.	Muzak!	Paul Monaghan	M/C	4	Superb 3-channel music in machine code.
41.	SpecTec Demo & Snake Game	Dave Gosnell	M/C	30	A great Amiga-style demo PLUS the classic Snake game
42.	Boot	Unknown	M/C	2	A machine code routine to completely reset your +3.
43.	Sound to Light	Daniel Garner	M/C	7	TWO different sound to light converters.
44.	Kingfisher	Richard Shelford	SCREEN#	7	Colourful picture of the bird of the river banks.
45.	Countryside Scene	Richard Shelford	SCREEN#	7	Excellent picture of the Cornwall countryside
46.	Autoloader	Marc Reed	BASIC	13	Useful utility that automatically adds a loading menu to your disks.
47.	Easylist	Daniel Garner	BASIC	2	Produces neat, structured and easy to read BASIC listings
48.	Calendar	Daniel Garner	BASIC	2	Produces a neat calendar for any month, with a print option.
49.	+3 Disk Checker	Daniel Garner	BASIC	9	Checks disk space and that files are not corrupted
50.	Fonts	D.Garner & P.Gideon	Fonts	8	3 slick new character sets for your Speccy
51.	Recover	Joe Morrall	M/C	2	An essential program that will restore erased files!
52.	Big Text	P. Gideon	BASIC	2	Allows text to be displayed in a variety of different sizes
53.	Screen Fade	Daniel Garner	M/C	1	A very slick routine to fade the screen

# PD Software List

No.	Title	Author	Type	K	Description
54.	Hex-Dec-Hex Converter	Daniel Garner	BASIC	2	Converts hexadecimal numbers to decimal numbers and vice versa.
55.	REN Address Finder	Daniel Garner	M/C	7	For use with 56. Find address of first character of a REN.
56.	64 Column Display	Daniel Garner	M/C	4	Squeezes 64 characters into one line of the screen.
57.	Chordata	Dave Rogers	BASIC	17	Something to do with music, I'm not sure what, though!
58.	Drawmaster	Grant Punchard	BASIC	23	A great pools-predictor PLUS a random story generator!
59.	Axel F, The Sequel!	M.Kirk & L.Davis	BASIC	10	Another Axel F tune
60.	Clock	Lee Davis	BASIC	3	Displays an on-screen analogue and digital clock
61.	Cyborg	Lee Davis	BASIC	7	Rather slow arcade-style game
	City Screen!	Lee Davis	M/C	2	Spins a screen.Takes a while to set up but the finished effect is good
	e-Scroller	Lee Davis	M/C	2	This is... er... a message scroller!
	Storer	Lee Davis	M/C	1	Stores a screen in RAM to be recalled at will.
	Maker	Lee Davis	BASIC	1	Draws pretty patterns!
	ate	Lee Davis	BASIC	7	Stock market speculation game
	Wordprocessor	Lee Davis	BASIC	3	Very poor BASIC "wordprocessor"
	Sampler	Lee Davis	BASIC	2	Good machine code sampler
	Galore!	D.Guard	Fonts	28	24 excellent new Spectrum fonts
		Brian Gaff	M/C	1	ALTERS the RAM disk cache and position
	3	Chris Pile	M/C	12	Superb program. Crunches many files into one
	Height Text	Daniel Garner	BASIC	2	Prints double height characters
		Daniel Garner	BASIC	1	Gives the +3 a much-needed INSTR% function...
	RIGHT%, MID%	Daniel Garner	BASIC	1	...and LEFT%, RIGHT% and MID%
	128 Converter	Daniel Garner	BASIC	8	Converts +3/+2a BASIC file commands to work on a Spectrum 128/+2
		Brian Gaff (?)	BASIC	1	Program to DEEK and DOKE memory - great for hackers!
11.	Oxygene	P.Guard	M/C	44	Excellent sampled music demo of Oxygene
78.	Guardians	Wizard	BASIC	19	Great JD arcade adventure game
79.	Morse code Tutor	P.Gideon	BASIC	5	Good program to help you learn Morse code.
83.	Mouse Pointer Routine	Daniel Garner	M/C	8	Allows a pointer to be moved using a Keapston/Genius mouse.
81.	Datascr	Unknown	BASIC	1	No info available.
67.	Dr.Scroll	Chris Pile	M/C	10	Version of Dr Scroll for the VT1711 modes
83.	Mailsoft	Keith Beddoe	M/C	10	Programs 22 and 23 in one.
84.	RS232TR	Mike Sun	M/C	4	X-Loader/X-Modem transmission/receival program
85.	Tascol	Brian Gaff	M/C	2	Sets up Tasword 2 colours to your liking
86.	Unreformer	Brian Gaff	M/C	6	Converts viewdata frames into Tasword II files
87.	Mega Blast	Daniel Garner	M/C	9	A great sound to light converter.
88.	Compare	Unknown	BASIC	4	Compares two files and erases if required
89.	Hold It	Chezron Software	M/C	4	Great screen store utility
90.	Code Shifter	Chezron Software	M/C	7	Relocates "unrelocatable" code
91.	48 Return	Daniel Garner	M/C	1	Goes from 48 to +3 BASIC retaining use of printer port
92.	Hangan	Peter Naughton	BASIC	18	A 2-player Hangan game with great graphics
93.	Procross	Chezron Software	BASIC	29	Excellent crossword editor complete with deao crossword.
94.	Superaat	Ian Cull	M/C	4	Formats disks to 192K per side - 38K extra per disk!
95.	CD Demo	Players	M/C	40	An 8-track musical extravaganza!
96.	Manager	Peter Naughton	BASIC	16	An easy-to-use home accounting system
97.	Radio Coas	QMSKN	M/C	16	THE program for radio hams!! Handles RTTY, SSTV and Morse!
98.	Hi Format	Chris Pile	M/C	2	Formats disks to 203K/side!! A must for your collection!
99.	Amiga Ball	Leif Mortensen	SCREEN%	7	Speccy version of the classic Amiga ball picture
100.	Optical Illusion	Owen Brown	SCREEN%	7	A brilliant picture of the infamous "waterfall".
101.	Box Clever	David Tonks	M/C	29	A simple, but difficult and challenging puzzle game
102.	Up The Wall	David Tonks	BASIC	21	A maze-style game with a twist!
103.	AI Demo	D.Smith	BASIC	2	Game v computer where it learns from experience becoming unbeatable
104.	Biorhythms	D.Smith	BASIC	5	Creates a graph of your biorhythms for a given month.
105.	Super Darts	D.Smith	BASIC	9	An addictive darts game
106.	Mastermind	D.Smith	BASIC	9	A Mastermind game versus the computer



# PD Software List

<u>No.</u>	<u>Title</u>	<u>Author</u>	<u>Type</u>	<u>K</u>	<u>Description</u>
107.	New Pointer Routine	Daniel Garner	N/C	8	Updated version of program 80 for the Kempston/Genius mouse
108.	Jacksoft Assembler	H.G.Zezschwitz	N/C	9	A powerful Z80 assembler with full text editor
109.	Infodemo	Gary Stinson	BASIC	8	A very small demo of our PD Infobase. Try before you buy!
110.	C-DOS	Robin Clayton	BASIC	2	Another program to make file operations easier
111.	Gagdisk	Anonymous	BASIC	28	A huge collection of jokes - don't order this if you're easily offended
112.	Digipix (Part 1)	Grant Punchard	SCREEN#	57	A massive collection of great digitised pictures
113.	Digipix (Part 2)	Grant Punchard	SCREEN#	57	All 3 parts are needed for the program to work.
114.	Digipix (Part 3)	Grant Punchard	SCREEN#	57	Total length=171K 20p per part (members), 40p (non-members)
115.	Monitor	K.Loudon	N/C	3	A short but good disassembler with a working print option
116.	Disassembler	Dave Gorski	BAS+N/C	14	A great Z80 disassembler coping with the undocumented op-codes
117.	Ghost	M.Harris	N/C	5	48K Speccy emulator - some "+J incompatible" games will now work
118.	Timed-Tables	P.Smith	BASIC	9	Times tables test against the clock - one for the kids!
119.	Suns	K.Loudon	BASIC	10	Test your (and your childrens'!) maths
120.	The Shrink	Unknown	N/C	10	Got a problem? You need The Shrink!
121.	Fireview, VIX711 Version	Asl9+C.Pile&J.Goodwin	N/C	27	A VIX711 version of the excellent Fireview II comms package
122.	Dr.Scroll II	Chris Pile	N/C	7	Enhanced version of Dr.Scroll (82) with CRC Modem, for VIX711 modem
123.	Graveyard	Owen Brown	SCREEN#	7	Spooky scene over a graveyard
124.	Banner Maker	Keith Pirie	BASIC	4	Create large banners on Epson compatible printers
125.	Music Trivia	Keith Pirie	BASIC	30	Music quiz for upto 4 players
126.	One Arm Bandit	Keith Pirie	BASIC	11	An addictive fruit machine simulator
127.	The Rat	David Wilson	BASIC	6	Searches memory for 3 ASCII codes
128.	Objects	Keith Pirie	SCREEN#	7	A screen of PD Clip Art:Test tube,phone dial,arrow,brush,syringe+graph
129.	Japanese Patience	David Tonks	BAS+N/C	30	Version of the classic card game, Patience
130.	Oerkenvan	Leif Mortensen	BASIC	16	A difficult version of the classic Patience game
131.	4 In a line	David Tonks	BASIC	17	A two player game of "Connect 4" with great graphics
132.	Garden	David Tonks	SCREEN#	7	An amusing cartoon picture
133.	Solitaire	F.Haapson	BASIC	14	Speccy version of the ancient game
134.	Solchess	F.Haapson	BASIC	10	A combination of solitaire and chess
135.	Smooth Scroll	Paul Preston	N/C	4	A useful upwards scrolling routine with instructions
136.	Toolkit 50	Leif Mortensen	N/C	9	An excellent toolkit with over 20 functions
137.	Utility 1	Geoff Wearmouth	N/C	8	Great utility with UDG editor, TV Testcard and font editor
138.	Utility 2	Geoff Wearmouth	N/C	10	Easy to use utility with block delete and full renumber functions.
139.	Linesplit	Brian Gaff	N/C	5	Splits a BASIC line in two to save retyping.
140.	Chezfill	Chezron Software	N/C	6	A fast fill routine complete with demo
141.	Grouff	Leif Mortensen	SCREEN#	7	A colourful fantasy picture
142.	Oh Sh&E!!	David Tonks	SCREEN#	7	Amusing and brilliantly drawn cartoon screen
143.	Convertall	Ken Davies	BASIC	4	A program for those useful number conversions
144.	ANSI Graphics	J.Dourish	N/C	9	20 Useful UDGs similar to the ANSI set found on PCs
145.	REN Maker	M.Goodman	N/C	3	Machine coders! Creates an empty REN statement of any size.
146.	Mylinear	I.Miller	BASIC	3	Something to do with linear interpolation, whatever that is!
147.	Milgraph	I.Miller	BASIC	4	More linear interpolation! Plots graph of any function y=f(x)
148.	Homesec	Keith Pirie	BASIC	8	Easy-to-use program to assess the security of your home
149.	Clip Art	Keith Pirie	SCREEN#	21	3 more screens of PD Clip Art
150.	Batman	Chris Kelly	SCREEN#	7	Picky of the famous Batman logo
151.	MC to BASIC	M Harris	N/C	2	Great program to put machine code into DATA statements.
152.	Planet	K.Hardy	SCREEN#	7	Reasonable picture of a planet and its moon
153.	Ghosts 'n' Goblins	K.Hardy	SCREEN#	7	Picture from the famous game
154.	Menu	Peter Naughton	BASIC	4	A very easy to use disk menu program, suitable for seall children
155.	Z80 Disassembler	Axel Schaike	N/C	5	Yep, it's another disassembler!
156.	Boombax	B.Oreskov&H.R.Jensen	N/C	19	A music demo with a selection of different tunes
157.	Drumbeat	Unknown	BASIC	2	A drum beat simulator allowing you to write your own beats
158.	Snake	Unknown	N/C	6	Another simple but challenging game

# PD Library

To order Public Domain Software from our list, simply quote the program numbers that you'd like (preferably in numerical order), program names are not needed (but can be included for verification if you wish). Our charges are based upon the amount of disk space that each program requires, and are:

	Members	Non-Members
Titles 1K to 9K:	5p each	10p each
Titles 10K to 19K:	10p each	20p each
Titles 20K to 29K:	15p each	30p each
Titles over 29K:	20p each	40p each
CP/M Volumes:	50p each	£1 each
PD Infobase:	£195	£195
PD Infobase Update:	50p	-
Order Charge:	60p per order	60p per order

The order charge is added to cover the high cost of cashing cheques, etc (it costs us 59p per cheque) and is 60p per order of any size. If only ordering PD INFOBASE you need not pay the order charge. It does, however, apply to PD Infobase Updates, although PD Software may be ordered at the same time.

You should send your blank (formatted) 3" disk, along with payment (cash, £5p/20p stamps, PO or cheque made payable to "Garner Designs Software" as usual). Please also enclose an a/c (or just stamps if using a padded envelope) for the return of your disk. The address is Gary Stimson, 4 Fox Covert Drive, Roads, Northants, NN7 2LL.

Have you got any PUBLIC DOMAIN programs that we haven't? If so, WE WANT THEM! Submissions to the Library are always welcome and, as long as software is of reasonable quality, it should find a place in the Library. So if you feel that you are able to contribute (whether it be your own creation, or something that you have picked up from another source) then please do, we and the other members would be very grateful.

Anyone submitting software (including brief instructions please, preferably contained within the program itself or on a .DOC file) to the Library will receive two FREE programs of your choice for every one of yours that is included in the Library. If we don't require your software then you can have one FREE program from the software list (excluding CP/M Volumes).

Also, if you'd like to submit a CP/M Volume that we haven't got, then we will give you one FREE CP/M Volume of your choice or 50p worth of software from our list. When compiling volumes, please note that they should be nearly 173K long (ie, one side of a disk) and include all the relevant .DOC files.

Don't forget to say what freebies you'd like, in order of preference.

## CP/M Software List

CP/M Volumes are available for only 50p each (non-members £1), when you send a formatted 3" disk and see. Each Volume uses upto one side of a disk. Most files have an accompanying .DOC instruction file that can be read with COPY "name.DOC" TO SCREEN\$ or printed using COPY "name.DOC" TO LPRINT. Remember that CP/M Volumes will require a copy of +3 CP/M and sometimes Mallasd BASIC to work! (If you don't know what CP/M is, then send a see for free info). The following volumes are currently available:

**Volume 1** - Features expanded disk catalogue, DICE-like disk maintenance utility, disk copying tool and a good WORDSTAR compatible wordprocessor.

**Volume 2** - A MASSIVE collection of programs and routines. Includes: Anagrams, biorhythm, calendars, currency conversion, disk clean-up utility, file cruncher, library utility, Mastermind game, ASCII file displayer, base conversion, file sorter and much more.

**Volume 3** - Another huge CP/M collection. Including: File extractor, FX80 printer tool, file printer, new RAM disk program, REM remover, find and exchange program, "Wordstar" cleaner and more! Something for everyone!

**Volume 4** - Another great assortment of files: Useful text reformatter to print on BOTH sides of fan-fold paper, file chopper, control code stripper, find word routine, sector editor (great for hackers), word/line counter, Spacy/Mex (+3 version of Mex) and more! Serious +3 users will love it!

**Volume 5** - If you're into programming, get this. This volume contains an excellent version of the popular C language (with files, including a code optimiser) PLUS a very comprehensive Z80 assembler!

**Volume 6** - Contains a version of the industry-standard MICROSOFT BASIC for CP/M machines, files for Volume 5's C Compiler and more.

**Volume 7** - DBQ, a database with a powerful, structured query language, designed for ease of use. Complete with 59K on-disk manual.

**Volume 8** - DIMS, An easy to use card-index style database capable of mailmerge, label printing, etc. Can even create:

mailmerge files for Teasword +3.

**NEW! Volume 9** - Contains DU49 - a superb multi disk formatter and PLOT 33 which will turn your printer into a graphics plottter!

# PD Top Ten

<u>Position</u>	<u>Title</u>	<u>Author</u>	<u>List Number</u>
1	Hi Format	Chris Pile	98
2	Parameters	Brian Gaff	8
3	Menu/Cat Utility	Brian Gaff	3
4	Recover	Joe Worall	51
5	Jacksoft Assembler	H.G.Zezschwitz	108
6	Manager	Peter Naughton	96
7	Fonts Galore	D.Guard	69
8	Autoloader	Marc Reed	46
9	+3 Disk Checker	Daniel Garner	49
10	Screen Planner	Screen Planner	16

Most popular CP/M Volume = 1

Chart covers August to end September 1990

As predicted two months ago, Hi Format has jumped straight in at number 1. 3" disks are very expensive, so it's not surprising that many people want to squeeze an extra 60K onto a disk.

Numbers 2,3,4,7 and 8 were all in the chart last time, and are still incredibly popular. Params makes the disk drive faster and quieter, Recover is a superb program to restore erased files, whilst Menu/CAT utility and Autoloader will both add a neat menu to your disks. Fonts Galore is an excellent collection of 25 character sets, all much better than the Speccy one.

Manager is an easy-to-use alternative to a spreadsheet. It allows you to enter your household accounts, monthly income, bills and so on, then will calculate how much you've got left to take along to the Computer Shopper Show with you.

The other new entries are Screen Planner, +3 Disk Checker and Jacksoft Assembler. All are good programs and pretty self-explanatory, perhaps with the exception of Screen Planner - it's a collection of useful routines to access the screen.

What's going to be at next month's number one is anybody's guess, but one "newcomer" that is doing remarkably well is Digipix - a superb 3-part collection of digitised pictures. It shows what good quality pictures can be digitised with the fairly low-cost digitiser from Romantic Robot.

# The Captain's Log

This issue very nearly didn't get to you this month. While we were in full flow getting everything ready, the PSU on one of our +3s decided to pop its clogs - well explode to be precise. It had a 30 second burst of crackling followed by a loud bang, which was then followed by the PSU emitting thick smoke. Not a pleasant sight, or smell! And our smoke detector didn't like it much either!

So the last half of this issue of +3 CONTACT was completed amidst the people frantically fighting for the use of our one remaining +3.

This month's best contributor prize goes to Mr A.Fletcher for his excellent showing how to fit an sound amplifier in your +3. Mr Fletcher wins an extra month's membership to the +3UG. We've had quite a few contributions recently which have a distinct hardware theme, and we'll hopefully have some more soon.

I must also extend my thanks for all those members who have written to me their views about Amstrad's decision to stop producing the +3. As noted you read in issue 14 of +3 CONTACT or issue 29 of New Computer Express, my views on the matter are quite clear and I still believe the Spectrum has a good few years left yet.

In stark contrast to Amstrad's views on the future of the +3, we at Warner Designs are continuing to extend and consolidate our position as the purveyors of Spectrum information for "serious" users. These are being finalised at the moment, and although we have a feeling that a few members will think they are a bit radical, the resulting improvement in the scope of services and quality of magazine will make it well worth while. Issue 16 will contain more details.

Finally, has anybody got an old issue of 'ZX Computing' they could lend me? I've been desperately searching through my magazine collection, my I seem to have disposed of all my copies, and I need a copy to verify some information. So if you have an old copy lying around somewhere (any issue will do) then I'd be indebted if you could send me a copy (I'll return it ASAP). Thanks.

See you all at the All Formats Show, November 4th ....

D.G.